Ph levels lab assignment

These ingredients have a different range Of acidity levels, which we measured with a digital pH meter. We also used a beaker mixer in order to mix the liquids so they dissolve correctly. Method: After gathering all of the graduated cylinders and glass beakers that will be used in the experiment you will be able to begin taking measurements and mixing different ingredients together to see the change in pH levels. Then you want to take a graduated cylinder and measure out ml of tap water and then transfer it to a sterile ml beaker.

You then repeat that step with soda ND milk but make sure you are using a new clean beaker with each new ingredient. Now you will have to make the diluted lemon juice, to do this you want to add ml of lemon juice and ml of distilled water in a ml glass beaker. Using the pH meter test the pH of each of the liquids in the glass beakers. To use the pH meter efficiently you should turn it on and put it in the liquid while stirring it until there is a steady number. This is the number you will see on the screen showing the pH of the initial liquid.

Record the data you found in the chart on page 3 of the packet. Next crush one antacid tablet with emmer and mix it into ml of distilled water. It is very important that you do not mix the tablet with tap water. Then take the pH meter and test the pH level of the new mixture and record it in your Antacid-Soda Solution data sheet. Using the graduated cylinder measure out ml of the antacid mixture you just made and add it to the 50 ml beaker of soda. Mix the two liquids together and use pH meter and record the pH level.

After you recorded your information add another 1 Mol of the antacid mixture to the soda, then mix and record the new pH level. Add another ml of the antacid mixture to the odd mix and record the new pH reading. After this your data chart will be filled in, and you are ready to plot your newly found data on the proper graph. Now it is time to demonstrate the spoiling of milk by taking ml Of the diluted lemon juice that you mixed earlier, and add it to the beaker filled with ml of milk.

Mix this new solution and take a reading on what the pH level is and record it in the Lemon Juice- Milk solution data table. While you are adding ml more lemon juice solution to the milk you want to make sure you take note on the change in the appearance of the milk. Then add an additional 1 Mol of the diluted lemon juice to the mix and find and record the pH level. Finally add 1 Mol more of the lemon juice to the milk, mix it thoroughly and record the new pH level. Then you have a second filled data chart that you have to take the data and plot it on the Dilute Lemon Juice Solution graph.

This shows the change in pH of milk as you add more and more diluted lemon juice to it. Results: The first thing we collected data from was the original raw ingredients including tap water, distilled water, soda, milk, dilute (1: 5) lemon juice, and dissolved antacid solution. We used these ingredients and took the pH of each liquid and got 7. 1 for tap water, 6. 25 for distilled water, 2. 5 for soda, 7. 06 for milk, 2. 54 for dilute lemon juice, and 7. 7 for antacid solution.

The next group of information that we gathered was the change in the pH level of soda by adding the dissolved antacid solution. The results that we

gathered consist Of the initial pH of soda to be 2. 5, and when We added ml of the solution the pH increased to 4. 45. When an additional ml of the solution was added to the soda the pH increased again to 5. 35. Finally we added another 1 Mol of he solution and the pH once again increased to 5. 61. We proceeded to do the exact thing to see the change in pH of milk when more and more diluted lemon juice was added.

For this set of data the original pH of milk was 7. 06, when ml of the lemon juice solution was added to the milk the pH decreased to 6. 21 . After another 1 Mol of the solution was added to the milk the pH decreased to 5. 54. Next we added the last ml of the diluted lemon solution to the milk the pH changed to 5. 09. Once we fully completed gathering all the data we proceeded to use this data to construct two graphs wowing the curve of the pH levels when another solution was added to one of the original ingredients.

Conclusions: The results of the experiment mean that when you take something that is pretty acidic like soda and add something closer to a neutral pH level but still on the acidic side like the antacid solution the ending solution will get less and less acidic and closer to a neutral PH. Also if you take something that is closer to a neutral pH level like milk and add something that is more acidic then the ending solution will get Increasingly acidic.

The equipment in the experiment irked for what were using it for but in a professional lab they would use a better pH meter because the one we were using jumped around a lot so it was hard to get an accurate reading. This equipment is related to everyday life because we put a lot Of different liquids

into our body that have a variety of pH levels. So it is important to know the reaction that occurs when mixing different liquids together. Questions: 1 . The relationship between the pH of milk and the quantity of dilute lemon juice solution is when more of the lemon juice is added to the milk it makes he milk become more acidic.

The relationship is also decreasing in the pH level, and the relationship of pH appears to be more linear. 2. The relationship between the pH of soda and the quantity of antacid is when more antacid is added to the soda it makes the soda become more of a base instead of an acidic liquid. The relationship is also increasing in the pH level when it becomes more of a base, and the relationship of pH appears like a plateau. 3. The soda-antacid relationship and the milk-dilute lemon juice solution relationship are complete opposites.